

MAY 06 2004

California Energy Commission
Docket 03-IEP-0
May 4, 2004

Testimony to be Included in the Workshop on
Accelerated Renewable Energy Development

Stephen Heckerroth
P.O. Box 151
Albion, CA 95410
steve@renewables.com

The Governor's Pledge



"California's energy crisis is not over. If we do not act now, California will face energy shortages as early as 2006.

I'm going to encourage builders to build homes using partial solar power.

I intend to show the world that economic growth and the environment can coexist."

Environmental Action Plan Goal

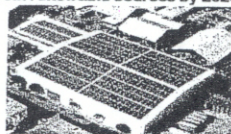
"By 2005, 50% of new housing developments would install solar PV."



"Derive 33% of the state's power from renewable sources by 2020."



PowerLight Corp. Berkeley, CA



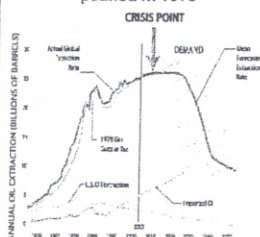
Solar Integrated Technologies, Los Angeles, CA

Suggested Reading



Energy Independence & Security

US oil and gas production peaked in 1970



Californians pay \$80 Billion/year to other States and Countries for 80% of the fuel they burn.

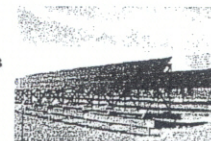
California is the Middle East of Solar Power



Every hour, the sun showers the earth with more power than human beings consume in an entire year.

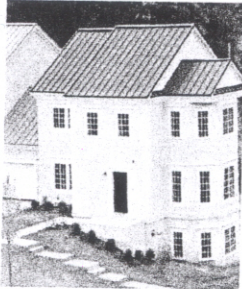
Centralized Power Generation

- Uses valuable land
- Requires long permitting process
- Takes a long time to build
- Has high-security costs
- Has high construction costs
- Requires dedicated transmission and distribution lines
- Transmission and distribution lines use valuable land
- Requires connections to other power generating facilities
- Requires transformers and switching gear
- High reclamation costs after useful life
- Increases load on distribution and transmission lines
- Produces power valued at low WHOLESALE rate



Distributed Power Generation

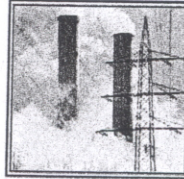
- Requires no additional land
- Requires no additional permitting time
- Requires no additional distribution lines
- Serves the dual function of roofing and power generator
- Needs no added security
- Has minimal impact on transmission and distribution infrastructure
- Produces power valued at high RETAIL rate and can be time of use (TOU) Net-Metered for Peak Power Shaving



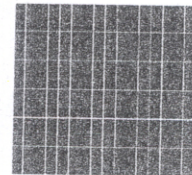
Energy Source Choices

Burning Fossil Fuel consumes Oxygen (a kind of important resource), creates toxic gases and causes global climate change

PVs need no fuel (except sunshine) have no moving parts, require little or no maintenance and are zero emission



Conventional power plants and fuel extraction sites required a vast amount of land, expensive reclamation and cause sickness and death

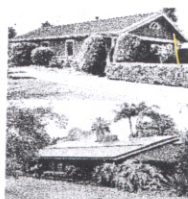


BIPV distributed generation requires NO additional land or expensive reclamation and causes NO sickness or death

Environmental Consequences

- Ugly infrastructure
- Polluted air
- Extraction site devastation
- Polluted land
- Spills and polluted water
- Energy resource wars

- PV roofing
- Clean air
- No extraction sites
- Healthy land
- No water pollution
- No resource wars



Choose Wisely